THE PLANNING ACT

Ontario

POLICY STATEMENT

Flood Plain Planning

A proposed policy statement of the Government of Ontario issued for public review

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Minister of
Natural Resources

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87-01080/

IMPORTANT

This proposed statement has not yet been finally approved by the Provincial Cabinet.

It is being circulated for public review and comment, as required by the Planning Act. All comments received will be considered and appropriate revisions made to the policy statement before it is finally approved.

Comments on the proposed policy should be addressed to:

Conservation Authorities & Water Management Branch
Ministry of Natural Resources
Room 5620, Whitney Block
Queen's Park, Toronto, Ontario
M7A 1W3,

by December 31, 1986.

THE PLANNING ACT 1983 – SECTION 3

3. —(1) The Minister, or the Minister together with any other minister of the Crown, may from time to time issue policy statements that have been approved by the Lieutenant Governor in Council on matters relating to municipal planning that in the opinion of the Minister are of provincial interest.

(2) Before issuing a policy statement, the Minister shall confer with such municipal, provincial, federal or other officials and bodies or persons as the Minister considers have an interest in the proposed statement.

(3) Where a policy statement is issued under subsection (1), the Minister shall cause it to be published in *The Ontario Gazette* and he shall give or cause to be given such further notice thereof, in such manner as he considers appropriate, to all members of the Assembly, to all municipalities and to such other agencies, organizations or persons as he considers have an interest in the statement.

(4) Each municipality that receives notice of a policy statement under subsection (3) shall in turn give notice of the statement to each local board of the municipality that it considers has an interest in the statement.

(5) In exercising any authority that affects any planning matter, the council of every municipality, every local board, every minister of the Crown and every ministry, board, commission or agency of the government, including the Municipal Board and Ontario Hydro, shall have regard to policy statements issued under subsection (1). 1983, c. 1, s. 3.

FLOOD PLAIN PLANNING POLICY STATEMENT

PURPOSE

This document is prepared under the authority of section 3 of the Planning Act, 1983, and is the Province of Ontario's policy statement on planning for flood plain lands.

INTERPRETATION

This provincial policy statement:

- is issued jointly by the Minister of Natural Resources and the Minister of Municipal Affairs under the Planning Act, 1983;
- does not supersede or take priority over other policy statements issued under section 3 of the Planning Act, 1983, or any other policy approved by the Lieutenant Governor in Council; and
- replaces the "Flood Plain Criteria — A Policy Statement of the Government of Ontario on Planning for Flood Plain Lands" issued in September 1982.

BACKGROUND

The need to manage flood plain lands was emphasized in 1954 when Hurricane Hazel struck the Metropolitan Toronto area resulting in the loss of 81 lives and approximately $75 million in property and other damages.

Since that time, many flood prone areas have been protected throughout Ontario by remedial measures and efforts have been made to minimize the intrusion of new development into the more hazardous portions of flood plains.

Although flood plains have been actively managed for more than 30 years, problem areas still exist. Since the mid-1970s, major floods resulting in millions of dollars of damages have occurred in Cambridge (1974), Dover Township (1979), Field Township (1979), Nipissing River/French River area (1979), Port Hope (1980), Windsor (1981), Chatham, Dover, Dresden, Huntsville, and Fort Albany (1985), and Winisk (1986).

In 1985, Ontario experienced a record number of floods for a given year. Province wide, approximately 2,000 homes were flooded or made inaccessible by high water levels and 11,000 hectares of agricultural land were flooded.

In addition to the loss of life, an immeasurable cost, and direct costs from damages to buildings and structures, indirect costs and social disruption have also been extensive in certain areas. For example, after the 1979 flood in the Town of Field, many of the local residents had to be relocated because of the severe damage and destruction to their homes. The mental anguish of being flooded and the resulting social disruption of relocation are real but often overlooked aspects of flood susceptibility.

Therefore, in the planning and management of flood plain lands, there is a government role which can be summarized as follows:

- to provide order and equity in the use/non-use of flood plain lands; and
- to protect society, including all levels of government, from being forced to bear unreasonable social and economic burdens of unwise individual choices.

In Ontario, flood plain management consists of a combination of 3 components:

- prevention
    - land use planning and regulation of development
- protection
    - structural/acquisition measures
- emergency response
    - flood warning and combat/disaster relief.

a) *Prevention*

The orderly planning of land use and the regulation of development represent the preventative approach to flood plain management and provide the focus for this policy statement. This approach is the most effective in helping to ensure *new* buildings and structures are not flood susceptible and that upstream and downstream problems do not occur as a result of new development.

The Ministry of Municipal Affairs, and the municipalities of Ontario, through the Planning Act, 1983, are responsible for land use planning in the Province. The Ministry of Natural Resources and the Conservation Authorities of Ontario act in an advisory capacity to the Ministry of Municipal Affairs and the municipalities on land use matters related to flooding.

The Ministry of Natural Resources, through the administration of the Conservation Authorities Act, R.S.O. 1980, together with the Conservation Authorities, have traditionally played the foremost role in the overall management of flood plains and will continue in this regard. Through regulations, Conservation Authorities review development proposals from the technical viewpoint of flood susceptibility and upstream/downstream implications. Where Conservation Authorities do not exist, the Ministry of Natural Resources is responsible for the implementation of flood plain management policies and practices.

The preventative approach may include the acquisition of undeveloped flood plain lands in certain situations. Such acquisition is usually only considered, however, if other resource management objectives are to be achieved.

b) *Protection*

The protection approach involves the construction of dams, dykes, channels, diversions and other flood control works. These works are designed to provide protection to *existing* development located in the flood plain.

In some instances though, a cost-benefit analysis may indicate that acquisition and the removal of buildings from the flood plain is more appropriate than the construction of protective works.

c) *Emergency Response*

The Ministry of Natural Resources, in co-operation with the Conservation Authorities of Ontario, maintain a streamflow forecast centre which is linked to a network of weather stations, stream gauges, and rain gauges throughout the Province. Advance warning of an impending flood enables municipalities and other government agencies to put into operation their emergency action plans for evacuating people and moveable property from flood susceptible areas.

Various levels of government have historically provided disaster relief and assistance to flood victims after major flood events. However, government subsidies do not cover all losses. They specifically exclude such items as secondary residences, landscaping, recreational vehicles, and non-essential furniture/appliances. Also, flood insurance on private properties in flood risk areas is not readily available at economical rates.

Although this approach assists in reducing the threat to life and some property losses, it does not prevent flooding and the bulk of related damages from recurring.

Each of the three components is designed to address different aspects of flood plain management. Over the long term, however, the preventative approach is the preferred approach to flood plain management. By effective land use planning and regulation of development, problems relating to flooding can be prevented or minimized before they occur. It is in this context that this policy statement takes effect.

DEFINITIONS

For the purpose of this policy statement,

- *Development* means the construction, erection or placing of a building or structure of any kind or the making of an addition or alteration to a building or structure that has the effect of increasing the size or usability thereof, and includes such related activities as site grading.

- *Fill, Construction, and Alteration to Waterways Regulation* means a regulation passed pursuant to Section 28 of the Conservation Authorities Act, R.S.O. 1980, or its successors, whereby a Conservation Authority may, among other matters, regulate:

    - the straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse;

- the construction of any building or structure in or on a pond or swamp or in any area susceptible to flooding; and

- the placing or dumping of fill of any kind in any defined part of the area over which the Conservation Authority has jurisdiction in which, in the opinion of the Conservation Authority, the control of flooding or pollution or the conservation of land may be affected.

- *Flood* means a temporary rise in the water level resulting in the inundation of areas adjacent to a watercourse not ordinarily covered by water.

- *Flood Fringe* means the outer portion of the flood plain between the floodway and the limit of the regulatory flood. Flood depths and velocities are generally less severe in the flood fringe than those experienced in the floodway.

- *Flood Plain* means the area, usually low lands, adjoining a watercourse which has been, or may be covered by flood water.

- *Floodproofing* means a combination of structural changes and/or adjustments incorporated into the basic design and/or construction or alteration of individual buildings, structures or properties subject to flooding so as to reduce or eliminate flood damages.

- *Floodway* means the channel of a watercourse and that inner portion of the flood plain where flood depths and velocities are generally higher than those experienced in the flood fringe. The floodway represents that area required for the safe passage of flood flows and/or that area where flood depths and/or velocities are considered to be such that they pose a potential threat to life and/or property damage.

- *Level of Protection* means a specified level, elevation and/or flow velocity to which new development must not be susceptible to flood related damage.

- *Observed Flood Event* means a flood actually experienced in a particular watershed or portion thereof.

  Subject to the policies contained in this document, and the availability of sufficient technical data, an observed flood event may be used for regulatory purposes as follows:

  — to define flood plain limits for that area where the event specifically occurred through the use of flood data as observed; or

  — to define flood plain limits for an entire watershed by transposing or extending data derived from the observed flood event with reference to the physical and land use characteristics of the entire watershed. The transposing of data is considered acceptable where the evidence suggests that the flood event could have potentially occurred over other portions of the watershed.

- *100 Year Flood* means that flood, based on an analysis of precipitation, snow melt, ice jams or combinations thereof, having a return period of 100 years on average, or having a 1% chance of occurring or being exceeded in any given year.

- *Regulatory Flood* means the approved standard used in a particular watershed to define the limit of the flood plain for regulatory purposes.

- *Special Policy Area* means an area within a community that has historically existed in the flood plain and where strict adherence to certain Province-wide policies concerning new development would result in social and economic hardships for the community. As a result, site specific policies are formulated and applied within the defined limits of the special policy area.

- *Storm Centred Event* means a major storm of record used for regulatory purposes. The rainfall actually experienced during the major storm event can be transposed over another watershed and when combined with the local conditions, flood plain limits can be established. This centering concept is considered acceptable where the evidence suggests that the storm event could have potentially occurred over other watersheds in the general area.

  In Ontario, two storm centred events are used for regulatory purposes:
  the Hurricane Hazel storm (1954); and
  the Timmins storm (1961).

- *Two Zone Concept* means the approach whereby certain areas of the flood plain are considered to be iess hazardous than others such that development potentially could safely occur. The flood fringe defines that portion of the flood plain where development may be permitted, subject to appropriate floodproofing. The floodway defines that portion of the flood plain wherein development is prohibited or restricted.

- *Watershed* means all land drained by a river or stream and its tributaries.

BASIS OF POLICY

The provincial policies contained in this document have been developed based on the following objectives and principles:

Objectives

(1) to prevent loss of life;

(2) to minimize property damage and social disruption; and

(3) to encourage a co-ordinated approach to the use of land and the management of water.

Principles

(1) effective flood plain management can only occur on a watershed basis with due consideration given to the upstream/downstream and cumulative effects of development;

(2) local conditions (physical, environmental, economic, and social characteristics) vary from watershed to watershed and, accordingly, must be taken into account for the planning and managing of flood plain lands;

(3) the degree of risk (threat to life and property damage) can vary within the flood plain of a watershed and from watershed to watershed; some portions may be too hazardous for development while the potential for development to safely occur may exist for other portions;

(4) new development susceptible to flood damages or which will cause or increase flood related damages to existing uses and land must not be permitted to occur; however, some communities have historically located in the flood plain and as a result, special consideration may be required to provide for their continued viability; and

(5) flood plain management and land use planning are distinct yet related processes that require overall co-ordination on the part of municipalities, Conservation Authorities, the Ministry of Natural Resources and the Ministry of Municipal Affairs.

POLICIES

(1) *General*

It is the policy of the Province of Ontario that:

1.1 All land use planning and resource management bodies within the Province have regard to the implications of their actions respecting the creation of new or the aggravation of existing flood plain management problems.

1.2 Municipalities and planning boards[1] recognize flood susceptibility at the various stages of the land use planning process for which they have jurisdiction.

(2) *Regulatory Flood Standard*

It is the policy of the Province of Ontario that:

2.1 The flood standards used to define flood plain limits for regulatory purposes are:

(a) the flood resulting from one of the following storm centred events:
- Hurricane Hazel storm (1954)
- Timmins storm (1961);

(b) 100 year flood; and

(c) an observed flood event, subject to the approval of the Minister of Natural Resources.

2.2 The 100 year flood is the minimum acceptable regulatory flood standard.

[1] "planning board" refers to those planning boards established by the Minister of Municipal Affairs, in accordance with section (9) or (10) of the Planning Act, 1983.

2.3 For those watersheds with a regulatory flood standard greater than the minimum acceptable (See Figure 1), the option exists for municipalities and planning boards to apply to the Minister of Natural Resources, in accordance with procedures established, to change the standard, subject to the following overriding conditions:

(a) changes to the existing regulatory flood standard will only be considered with the support of a significant majority of municipalities and/or planning boards within the watershed, in consultation with the local Conservation Authority or Ministry of Natural Resources, where Conservation Authorities do not exist; and

(b) the lowering of the existing regulatory flood standard where the past history of flooding reveals a higher level is more appropriate will not be considered.

2.4 Where flooding is experienced in excess of the existing regulatory flood standard, the Minister of Natural Resources may require the regulatory flood standard to be modified to reflect the observed flood event.

(3) *Official Plans*

It is the policy of the Province of Ontario that:

3.1 Municipalities and planning boards show or describe flood plain lands in their official plans and incorporate policies to address new development consistent with this policy statement.

3.2 Municipalities and planning boards, in consultation with the local Conservation Authority or Ministry of Natural Resources, where no Conservation Authority exists, include in their official plans:

(a) policies whereby uses permitted in flood plains are cognizant of flood susceptibility and flood risk;

(b) policies whereby no new buildings or structures are permitted which are susceptible to flood related damages or will cause adverse impacts to existing upstream or downstream development or lands;

(c) policies addressing additions or alterations to existing buildings or structures and replacement of buildings or structures located in flood plains; and

(d) policies addressing such public and private works that must locate in flood plains by nature of their use.

3.3 Municipalities and planning boards identify in their official plans, the planning controls required to give effect to the policies identified in (3.2).

3.4 Where no official plan exists, the zoning document affecting the area contain provisions to reflect this policy statement.

REGULATORY FLOOD — Figure 1

ZONE 1 — Flood Produced by Hurricane Hazel Storm or the 100 Year Flood, whichever is greater

ZONE 2 — The 100 Year Flood

ZONE 3 — Flood Produced by the Timmins Storm or the 100 Year Flood, whichever is greater

Approximate boundaries of the Regulatory Floods

(4) *Two Zone Concept*

It is the policy of the Province of Ontario that:

4.1 For portions of flood plains that could potentially be safely developed with no adverse impacts, the Conservation Authorities in Ontario, or where no Conservation Authorities exist, the Ministry of Natural Resources, in co-operation with the watershed municipalities or planning boards have the option of selective application of the two zone (floodway – flood fringe) concept (see Figure 2).

4.2 New development in the floodway is to be prohibited or restricted.

4.3 The extent of the floodway is to be determined based on local watershed conditions, such as critical flood depth and velocity, existing and proposed development, and the potential for upstream or downstream impacts.

4.4 New development that may be permitted in the flood fringe be protected to the level of the regulatory flood.

4.5 Where the two zone concept is proposed to be applied or is considered to be a plausible option, municipalities and planning boards include policies in their official plans that explain the intent of the two zone concept and the potential developability of the flood fringe versus the floodway.

4.6 Where the two zone concept is applied, the flood fringe be zoned in conformity with the official plan designation, and the flood hazard and requirements for floodproofing be recognized in the zoning document.

4.7 Where the two zone concept is applied, the floodway be appropriately zoned to reflect its prohibitive or restrictive use.

(5) *Special Policy Area Concept*

It is the policy of the Government of Ontario that:

5.1 Where strict adherence to policies (3) and/or (4) is not feasible, the concept of special policy area status is recognized as a possible option for flood prone communities or portions thereof. Municipalities and planning boards may apply for special policy area status, in accordance with established procedures, and controlled development may be permitted once such status is obtained.

5.2 Municipalities and planning boards delineate special policy areas in their official plans and include policies indicating the circumstances under which new development may be permitted and identifying the minimum acceptable level of protection required for new development.

TWO ZONE FLOODWAY-FLOOD FRINGE CONCEPT

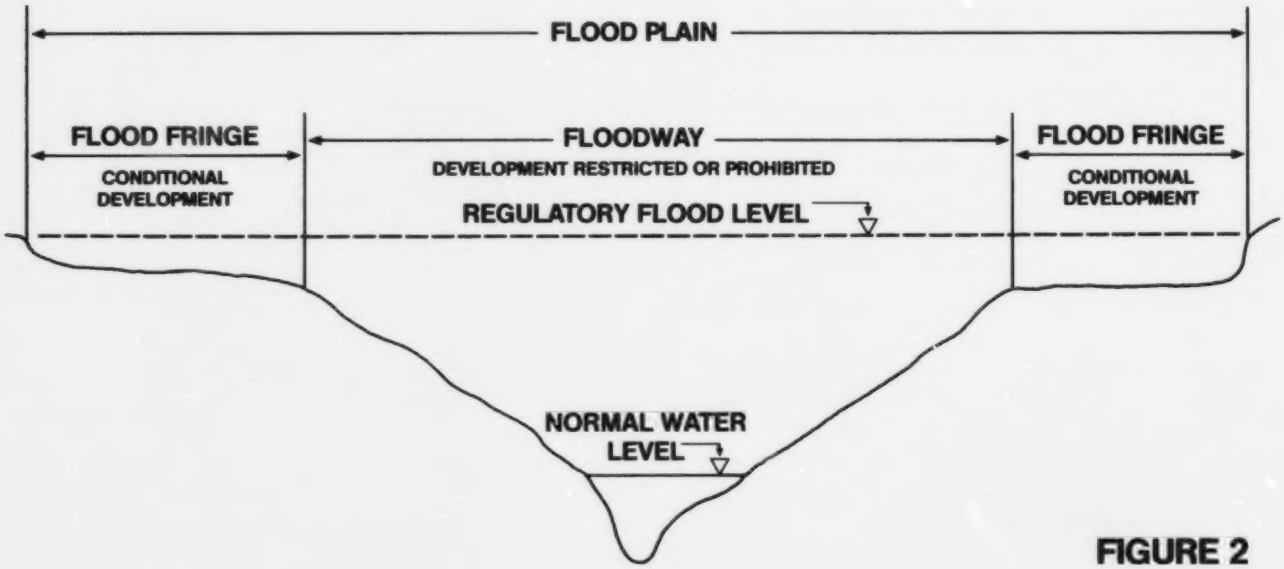

FIGURE 2

(6) *Floodproofing*

It is the policy of the Province of Ontario that:

6.1 Any new development permitted in the flood plain, in accordance with this policy statement, be protected by acceptable floodproofing actions or measures.

6.2 Ingress/egress for new buildings be such that vehicular and pedestrian movement is not prevented during times of flooding.

(7) *Public Safety*

It is the policy of the Province of Ontario that:

7.1 Notwithstanding policies (3), (4), (5) and (6):

(a) new development associated with substances of a chemical, hazardous or toxic nature, which would pose an unacceptable threat to public safety if damaged as a result of flooding or failure of floodproofing measures, not be permitted to locate in the flood plain;

(b) new development associated with institutional uses, such as hospitals, nursing homes and schools, which would pose a significant threat to the safety of the inhabitants (e.g. the sick, the elderly, the disabled or the young), if involved in an emergency evacuation situation as a result of flooding or failure of floodproofing measures, not be permitted to locate in the flood plain; and

(c) new development associated with essential services, such as police, fire and ambulance stations and electrical sub-stations, which must continue to function during a flood emergency, not be permitted to locate in the flood plain, if as a result of flooding or failure of floodproofing measures, delivery of the service would be impaired.

7.2 Notwithstanding policy (4.4), where new development, as described in policy (7.1) is permitted, a higher level of flood protection and/or extra floodproofing precautions may be required to ensure that any risk is minimal.

IMPLEMENTATION

- In exercising any authority that affects any planning matter, the council of every municipality, every local board, every Minister of the Crown and every ministry, board, commission or agency of the government, including the Ontario Municipal Board and Ontario Hydro, shall have regard to this policy statement as required under section 3 of the Planning Act, 1983.

- The Ministry of Natural Resources and the Ministry of Municipal Affairs will develop guidelines for the implementation of this policy statement, including the administration of the Planning Act, 1983, as it relates to flood plain lands.

- The Ministry of Natural Resources will develop technical guidelines for the calculation of flood lines and the mapping of flood plains.

- The Ministry of Natural Resources, in co-operation with the Ministry of Municipal Affairs, will develop procedures to be followed for applying to change the regulatory flood standard for a watershed.

- The Ministry of Natural Resources and the Ministry of Municipal Affairs will develop procedures to be followed in applying for special policy area status.

- The Ministry of Natural Resources, in co-operation with the Ministry of Municipal Affairs and other appropriate agencies, will identify acceptable types of floodproofing and their application to different types of land use.

- The Conservation Authorities, where they exist, are responsible for plan input and review related to flood plain matters and in this regard will:

    - make available any existing mapping, flood data or studies and provide technical assistance to any government body or planning authority, in particular municipalities and planning boards, and assist municipalities and planning boards to incorporate the intent of the provincial policy statement for flood plain management into the land use planning process and appropriate planning documents;

    - provide comments to review and approval agencies on proposed planning actions that may have implications for flood plain management;

    - make representation or provide technical expertise to the Ontario Municipal Board or other appeal bodies, where a matter related to this policy statement may be an issue;

    - consult with ministries, public agencies, boards, authorities, and municipalities on matters pertaining to flood plain management, as may be appropriate; and

    - inform and educate the general public on the principles and practices of flood plain management and provide information on the characteristics and consequences of a flood.

    Where Conservation Authorities do not exist, the Ministry of Natural Resources is responsible for plan input and review related to flood plain matters.

- The Conservation Authorities will administer the provisions of the Conservation Authorities Act, R.S.O. 1980, and Fill, Construction[2] and Alteration to Waterways Regulations passed pursuant to Section 28 of the Act, or successors thereto, to assist in the implementation of this policy statement.

[2]the "construction" component of Conservation Authority regulations is applied to areas draining 125 hectares or greater. Areas less than 125 hectares are considered "local drainage" and thus are the responsibility of the local municipalities.

- The Ministry of Natural Resources in conjunction with the Federal government will continue to administer the Canada-Ontario Flood Damage Reduction Program through the Conservation Authorities and the municipalities. This includes the carrying out of flood plain mapping and flood studies, and the preparation of information maps geared to the general public depicting flood susceptible areas.

- The Ministry of Municipal Affairs and municipalities with delegated approval from the Minister will ensure that all municipal planning documents to be reviewed or approved, have had regard to this policy statement.

- When an existing official plan or zoning by-law/order comes up for review, regard will be had for this policy statement.

- Municipalities, with input from Conservation Authorities, or the Ministry of Natural Resources where Conservation Authorities do not exist, will put in place planning controls necessary to implement flood plain provisions in official plans (such as zoning, site plan control).

- The Ministry of Natural Resources and the Ministry of Municipal Affairs will undertake periodic research programs to investigate and update planning implementation and flood plain management techniques.

- The Ministry of Natural Resources and the Ministry of Municipal Affairs, in cooperation with the Conservation Authorities, will administer this policy statement, as well as advise and explain its content and application to municipalities, planning boards, and other agencies.

For further information:

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Additional copies of this publication may be obtained from the local offices of the Ministry of Natural Resources or the Ministry of Municipal Affairs (Community Planning Advisory Branch).